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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/533,728
Filing Date: May 03, 2005
Appellant(s): BECKER, ROLF FRIEDRICH

William S. Francos
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 09/02/2008 appealing from the Office action mailed on 02/08/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2002/0168988	Younis	11-2002
4,315,332	Sakami et al.	2-1982
GB 2,238,438	Miyano et al.	5-1991
DE 19536580	Eynothen et al.	4-1997

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-5, 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Younis (US 2002/0168988)** in view of **Miyano et al. (GB 2238438)** and **Sakami et al. (US Patent 4315332).**

Consider **claim 1**, Younis discloses a mobile radio (figure 5, wireless device 100) comprising a GSM receiving branch (paragraph 27, figure 7, Communications Transceiver branch includes amplifier 152B and BPF 154B), an analog-to-digital converter (figure 7, A/D 168) next in line for converting analog signals into digital signals, a digital signal processor (figure 7, DSP 170) for reconstructing and

processing the received signals, a system controller (figure 5, control processor 112) for controlling the components of the mobile radio, a real time circuit (figure 5, local clock w-clock 114), in which a further receiving unit (figure 7, GPS receiving branch includes amplifier 152A and BPF 154A) is arranged for receiving a time reference signal (paragraph 35, GPS time), which further receiving branch comprises an antenna (figure 7, antenna 150) for receiving time reference signals, an amplifier (figure 7, amplifier 152A) for amplifying the received time reference signal, and a multiplex unit (figure 7, switch 156 is equivalent to a multiplex unit) inserted between the GSM receiving branch and the analog-to-digital converter (figure 7, A/D 168), which multiplex unit (figure 7, switch 156) can be supplied with the received analog mobile radio signal (communication transceiver branch) and the time reference signal (GPS receiving branch) and in which mobile radio the received time reference signal can be applied at a predetermined instant to the digital signal processor (DSP 170) for demodulation and filtering (figure 7) and to the system controller (figure 5, control processor 112, paragraphs 39-40, the control processor 112 is coupled to a timing source W_CLOCK 114, which maintains a local time for the wireless device 100; the received GPS signal is decoded by the DSP 110; and the DSP 110 and control processor 112 may be implemented as a single processor, a plurality of processors or a combination of processors and dedicated circuitry including application specific integrated circuits (ASICs)) for decoding, and there is provided to update the real-time circuit with the decoded time reference signal (paragraph 35, local clock w-clock 114 is synchronized with GPS time).

Younis shows three different embodiments of the receiving section (figures 5-7), figure 7 shows three receiving branches; each branch amplifies and filters the distinctive received signal, however, the circuitry of figure 7 has one shared receiving unit which comprises a tuning and down converting section (figure 7, elements 158,160,162,164 and 166). In the same reference, Figure 6 shows three different receiving units (104,106 and 108), each receiving unit comprises a tuning and down converting section (for example, the receiving unit 104 comprises elements 128A, 126A, 130A, 132A, 134A and 136A for tuning and down converting signal). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique of figure 6 as to modify the circuitry of figure 7 in which to include a tuning and down converting section on every receiving branch instead of using one shared receiving unit, as a result the three different signals could be received and established at the same time, therefore switching and processing time could be reduced.

Younis fails to specifically disclose a real-time circuit comprising an oscillator and a display for displaying information.

In the same field of endeavor, Miyano et al. disclose a real-time circuit comprising an oscillator and a display for displaying information (figure 1, Oscillator 22 and Display 21, claim 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by

Miyano et al. into the art of Younis as to include an oscillator for driving the local clock (real time clock) and a display unit for displaying current local time.

Younis fails to specifically disclose tunable capacitors for tuning to the transmit frequency.

In the same field of endeavor, Sakami et al. disclose tunable capacitors for tuning to the transmit frequency (column 1 lines 10-15, variable capacitance diode, Abstract, figure 1, tuning unit 1 comprises variable capacitance diode).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Sakami et al. into the art of Younis as to include tunable capacitors for tuning to a predetermined broadcasting frequency to receive time data.

Consider **claim 2 as applied to claim 1**, Younis as modified by Miyano et al. and Sakami et al. discloses characterized in that the multiplex unit can be controlled by the system controller (figure 7, paragraph 45, switch 156 is controlled to select a received signal).

Consider **claim 3 as applied to claim 1**, Younis as modified by Miyano et al. and Sakami et al. discloses characterized in that the tunable capacitance can be set by the system controller (Sakami et al., Abstract, tuning to receive more than two preset broadcasting stations).

Younis as modified by Miyano et al. and Sakami et al. fails to disclose that the gain factor of the amplifier can be set by the system controller.

Official Notice is taken that the teaching of amplifier gain control in a radio receiver is well known in the art, therefore a person skilled in the art would easily include the teaching of amplifier gain control as to control the signal level for a better processing.

Consider **claim 4 as applied to claim 1**, Younis as modified by Miyano et al. and Sakami et al. discloses characterized in that the real-time circuit can be updated by the system controller (Younis, local clock w-clock 114 is synchronized with GPS time; Miyano et al., figure 1, clock 19d is updated by the CPU 19c).

Consider **claim 5 as applied to claim 1**, Younis as modified by Miyano et al. and Sakami et al. discloses characterized in that the updating distance can be chosen at will or is fixedly programmed (Miyano et al., page 6 lines 11-14).

Consider **claim 7 as applied to claim 1**, Younis as modified by Miyano et al. and Sakami et al. discloses characterized in that the receiving unit is a receiving unit for frequency-modulated signals (Miyano et al., page 2, RDS of FM broadcast signal).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Younis (US 2002/0168988)** as modified by **Miyano et al. (GB 2238438)** and **Sakami et al. (US Patent 4315332)** in view of **Eynothen et al. (DE 19536580).**

Consider **claim 6 as applied to claim 1**, Younis as modified by Miyano et al. and Sakami et al. fails to disclose characterized in that the further receiving unit is a receiving unit for amplitude-modulated signals.

In the same field of endeavor, Eynothen et al. disclose receiving time data using amplitude-modulated signals (figure 2, time indication signal DCF77, the DCF77 in the medium wave frequency range (in the AM range)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Eynothen et al. into the art of Younis as modified by Miyano et al. and Sakami et al. as to include a receiving unit for receiving amplitude modulated signals as an alternative.

(10) Response to Argument

Regarding **claim 1**, Appellant argues that the applied references Younis and Sakami et al. fail to disclose tunable capacitors for tuning to the transmit frequency, there is no disclosure that the variable capacitors are used for tuning, and more significantly, for tuning to a transmit frequency; nor would there be because the timepiece does not transmit, but only receives. Namely, the time piece has a radio to receive updates of the current time for the watch. There is no disclosure of a transmission of RF or other signals, and thus no disclosure or suggestion of tunable capacitors to achieve that end. There is no rational underpinning to support the legal conclusion of obviousness at least because the timepiece would neither need nor include a device to tune to a transmit frequency when the timepiece does not transmit.

The Examiner respectfully submits that Sakami et al. disclose in figure 1 and column 1 lines 66-68, a timepiece radio receiver for receiving a radio frequency (RF) time signal comprising a tuning circuit 1 which carries out the selection of the various

radio frequency signals applied from an antenna; and the tuning circuit 1 comprises the schematic symbol of a variable capacitance diode. Sakami et al. further disclose in column 1 lines 9-23, that using the variable capacitance diode is advantageous over a variable condenser in frequency synthesizing (e.g., miniaturizing the circuit size), such variable capacitance diode is widely used for frequency synthesizing in a radio set, as shown in figure 1 the radio set comprising a frequency synthesized resonator (tuning circuit 1) built with the variable capacitance diode, and the radio set further comprises multiple functions e.g., outputting audio through speaker 6 and displaying time through timepiece 25. Tuning circuit 1 is tuned to a selected channel/frequency by applying a predetermined tuning signal outputted from D/A 14 to the variable capacitance diode, hence to receive broadcasted signals on the selected channel/frequency from a radio broadcasting base station.

The definition and schematic symbol of the variable capacitance diode are also defined by http://wikipedia.org as “In electronics, a varicap diode, varactor diode, variable capacitance diode or tuning diode is a type of diode which has a variable capacitance that is a function of the voltage impressed on its terminals.

”

Claim 1 claimed a GSM receiving unit and another receiving unit, however no transmission units present in claim 1. The limitation "the transmit frequency" lacks an antecedent basis, and it is being interpreted as the transmit frequency of the

broadcasted signals from the radio broadcasting base station. Tuning circuit 1 is tuned to the selected channel/frequency that has the same frequency as the transmit frequency from the radio broadcasting base station, in order to receive the broadcasted signals. Therefore, Sakami et al. disclose the variable capacitance diode (tunable capacitors) in tuning circuit 1 for tuning to the transmit frequency.

Younis discloses in figure 7 and paragraph 45, a communication receiving branch (e.g., GSM signals see paragraph 27 last 4 lines), a GPS receiving branch and a FM radio receiving branch. It is known that the GPS signals and the FM radio signals are narrow-band channel signals, and precisely selecting a receiving channel in GPS band or FM radio band is important, however Younis fails to specifically disclose a tuning circuit built with tunable capacitors to select a channel/frequency applied from an antenna.

Sakami et al. disclose the radio broadcasting receiver comprising tuning circuit 1 built with the variable capacitance diode (tunable capacitors) carries out the selection of the various radio frequency signals applied from the antenna, and the frequency being selected and received is displayed by indicator 16.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Sakami et al. into the art of Younis as to include tuning circuit 1 on the GPS receiving branch and the FM radio receiving branch for tuning to a selected channel/frequency to receive time data and etc.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/RuiMeng Hu/

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to RuiMeng Hu whose telephone number is 571-270-1105. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/RuiMeng Hu/
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October 27, 2008

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